INDEX

Abbott, W. M., 291
Abstracts, 430, 570
  basic, 77, 150
  clinical, 79, 204
Adrenal gland, effect of on immune response to skin grafts, 105
Al-Askari, S., 299
Alexander, J. L., 210
Alexander, P., 194
Allegretti, N., 215
Alleles, "major" histocompatibility systems, estimation of by mixed leukocyte culture test (man), 41
Allen, E. M., 259
Allogeneic grafts
  bone marrow, effect after cyclophosphamide (dogs), 378
  littermate animals, production of isoantibodies after (dogs), 468
  marrow, effect of radiation exposure rates (rats to mice), 259
Allografts
  eye chamber, vascularization and sensitization after (rabbit), 475
  kidney
    relation of anti-γ-globulin antibodies and transplantation antibodies in recipients (man), 281
    survival after pretreatment with antigen (dogs), 360
  rejection, tumor ribonucleic acid, 142
  renal, effect of cytosine arabinoside on (dogs) (Communication), 210
  skin
    activity of histidine decarboxylase on (rats), 99
    effect of biliary obstruction on survival (mice) (Communication), 576
    effect of committed lymphocytes in rejection, 459
    effect on reticuloendothelial system, 347
    endothelial cells as leukocyte bridges (Communication), 439
    failure of 6-mercaptopurine to prolong survival (mice), 498
    prolongation of survival by antiserum to calf thymosin (mice) (Communication), 223
    studies in pouch young (opossum), 67
    survival related to donor-recipient leukocyte typing, 188
Ambinder, E. P., 147
Amos, D. B., 220
Analysis, statistical, use in determining histocompatibility loci, 12
Antibodies
  anti-γ-globulin, relation to transplantation antibodies in renal allograft recipients (man), 281
  cytotoxic isoantisera, against θ-C3H isoantigen (mice), 132
  detection, following graft rejection (mouse) (Communication), 299
  formation during pregnancy, 562
  species-specific, in heterologous antilymphocytic serum, 112
  strain-specific, in heterologous antilymphocytic serum, 112
  transplantation, relation to anti-γ-globulin antibodies in renal allograft recipients (man), 281
Antigens
  histocompatibility, female, response to (chickens), 387
  leukocyte, effect of blood transfusion on typing by lymphocytotoxicity, 424
  loading, cell-free and antilymphocyte serum (Communication), 291
  primary challenge, effect on cytotoxic lymph cells, 194
  solubilized, effect on prolongation of renal allograft survival (dogs), 360
  species, relation to HL-A specificity (man), 554
Antilymphocyte serum
  cell-free antigen loading (Communication), 291
  heterologous, estimated by hemolytic antibody plaque test, 112
  immunosuppressive activity of (rats), 122
Antiserum, calf thymosin, effect on skin allograft survival (mice) (Communication), 223
Ara-cytidine, immunosuppressive activity of, 183
Atoynatan, T., 242
Autografts
  kidney, change in blood flow during re-

INDEX

Abbott, W. M., 291
Abstracts, 430, 570
  basic, 77, 150
  clinical, 79, 204
Adrenal gland, effect of on immune response to skin grafts, 105
Al-Askari, S., 299
Alexander, J. L., 210
Alexander, P., 194
Allegretti, N., 215
Alleles, "major" histocompatibility systems, estimation of by mixed leukocyte culture test (man), 41
Allen, E. M., 259
Allogeneic grafts
  bone marrow, effect after cyclophosphamide (dogs), 378
  littermate animals, production of isoantibodies after (dogs), 468
  marrow, effect of radiation exposure rates (rats to mice), 259
Allografts
  eye chamber, vascularization and sensitization after (rabbit), 475
  kidney
    relation of anti-γ-globulin antibodies and transplantation antibodies in recipients (man), 281
    survival after pretreatment with antigen (dogs), 360
  rejection, tumor ribonucleic acid, 142
  renal, effect of cytosine arabinoside on (dogs) (Communication), 210
  skin
    activity of histidine decarboxylase on (rats), 99
    effect of biliary obstruction on survival (mice) (Communication), 576
    effect of committed lymphocytes in rejection, 459
    effect on reticuloendothelial system, 347
    endothelial cells as leukocyte bridges (Communication), 439
    failure of 6-mercaptopurine to prolong survival (mice), 498
    prolongation of survival by antiserum to calf thymosin (mice) (Communication), 223
    studies in pouch young (opossum), 67
    survival related to donor-recipient leukocyte typing, 188
Ambinder, E. P., 147
Amos, D. B., 220
Analysis, statistical, use in determining histocompatibility loci, 12
Antibodies
  anti-γ-globulin, relation to transplantation antibodies in renal allograft recipients (man), 281
  cytotoxic isoantisera, against θ-C3H isoantigen (mice), 132
  detection, following graft rejection (mouse) (Communication), 299
  formation during pregnancy, 562
  species-specific, in heterologous antilymphocytic serum, 112
  strain-specific, in heterologous antilymphocytic serum, 112
  transplantation, relation to anti-γ-globulin antibodies in renal allograft recipients (man), 281
Antigens
  histocompatibility, female, response to (chickens), 387
  leukocyte, effect of blood transfusion on typing by lymphocytotoxicity, 424
  loading, cell-free and antilymphocyte serum (Communication), 291
  primary challenge, effect on cytotoxic lymph cells, 194
  solubilized, effect on prolongation of renal allograft survival (dogs), 360
  species, relation to HL-A specificity (man), 554
Antilymphocyte serum
  cell-free antigen loading (Communication), 291
  heterologous, estimated by hemolytic antibody plaque test, 112
  immunosuppressive activity of (rats), 122
Antiserum, calf thymosin, effect on skin allograft survival (mice) (Communication), 223
Ara-cytidine, immunosuppressive activity of, 183
Atoynatan, T., 242
Autografts
  kidney, change in blood flow during re-

jection as compared to homograft, 545
skin, activity of histidine decarboxylase on (rats), 99
Autotransplants, kidney, degeneration and regeneration of adrenergic nerves (Communication), 218
Azathioprine, effect on prolongation of homografts (mice) (Communication), 147

Bacon, L. D., 387
Bailey, D. W., 394, 567
Ballantyne, D. L., Jr., 274
Baroni, C. D., 303
Barriers, histocompatibility, immunity induced in by cell-free tumour fractions, 49
Bartfeld, H., 242
Bartlett, G. L., 225
Bashir, H., 220
Batchelor, J. R., 554
Beaudoin, J. G., 576
Bergentz, S.-E., 534
Blanden, R. V., 484
Blastocysts, development of, under kidney capsule (mouse in rats) (Communication), 437
Blood
change in flow, in autograft and homograft kidneys during rejection, 545
irradiation, preoperative extracorporeal, effect in renal transplantation (man), 534
transfusions, effect on leukocyte typing by lymphocytoxicity, 424
Bone, marrow, transplantation after cyclophosphamide (dogs), 378
BOOK REVIEWS
Biological properties of the mammalian surface membrane, 85
Mechanism and role of immunological tolerance, 434
Bove, J. R., 294
Boyle, W., 220
Burrell, R., 67
Busch, G. J., 360

Calabresi, P., 294
Capillary, migration culture, in delayed hypersensitivity studies, 242
Carlson, D. E., 259
Cell. *See* the specific type.
Chanana, A. D., 459
Chaperon, E. A., 87
Choudhury, A., 228
Claman, H. N., 87
Cohen, I., 468
Cohen, N., 332
Cohn, R., 545
Colombani, J., 188
Converse, J. M., 274
Correlation, histocompatibility, of isoantigen rho and *R-Z* locus, 233
Craig, J. V., 387
Crawford, M. K., 447
Creech, O., Jr., 176
Crim, J. A., 183
Cronkite, E. P., 459
Culture, capillary, system for delayed hypersensitivity studies, 242
Cyclophosphamide, effect on bone marrow transplantation (dogs), 378
Cytarabine, immunosuppressive activity of, 183
Cytosine arabinoside, effect on renal allografts (dogs) (Communication), 210
Cytotoxicity
isoantisera, formation of antibodies against θ-C3H isoantigen, 132
lymph cells, after antigenic challenge, 194
micro test (Communication), 220

Dagher, R. K., 360
Dausset, J., 188
David, J. R., 299
Davies et al., reference to (Letter), 290
Davis, W. C., 435
Degeneration, adrenergic nerves, in autotransplanted kidney (Communication), 218
Dekaris, D., 215
Denham, S., 194
DeWitt, C. W., 59, 122
Diethelm, A. G., 210
Diffusion, design for chambers (Communication), 225
Donor
differing from recipient at non-*H-2* loci, resistance to skin grafts induced by cell extracts (mouse), 401
effect of strain on mutual tolerance, unresponsiveness during secondary disease, 447
leukocyte typing with recipients, relation to allograft survival, 188
parental versus sibling, analysis of kidney transplants for homotransplantation, 246
syngeneic, cutaneous reaction after cell

Donor—*Continued*
injection (mice) (Communication), 215
Dwyer, J. J., 218

EDITORIAL, 76
Elandt-Johnson, R. C., 12, 41
Endothelial cell, leukocyte bridges in skin allografts (Communication), 439
Enzymes, histidine decarboxylase, activity on autografted and allografted skin (rats), 99
Epstein, R. B., 378
ERRATUM
correction for January, 1967 issue, 86
Estimation
isohemagglutinins, microassay (mouse) (Communication), 294
loci, contributing to histoincompatibility in strains (mouse), 394
Extracts, cell, resistance to grafts induced by in recipients differing from donor at non-*H-2* loci (mouse), 401
Eye, allografts, vascularization and sensitization after (rabbit), 475

Fractions, tumour, use for inducing immunity in histocompatibility barriers, 49
Franco, D. J., 73

Galton, M., 562
Gengozian, N., 155, 259
Genotypes, different, haemopoietic and lymphoid cell mixture effect on stem cells, 165
Githens, J. H., 73
Gland. *See* the specific type.
Globulin, anti-γ-globulin, relation of antibodies to transplantation antibodies in renal allograft recipients (man), 281
Gonads, effect on immune response to skin grafts (105)
Good, R. A., 1, 420
Graff, R. G., 372
Graff, R. J., 105
Graft. *See* the specific type.
Graft-versus-host reaction, effect of resistance and immunodepression (mice), 484
Gray, G. D., 183
Grogan, J. B., 475
Groth, C. G., 73

Haemopoietic cells, transplantation, effect on inactivation of stem cells, 165
Hall, J. G., 194
Hall, T. C., 210
Hardy, M. A., 223
Harris, S., 112
Harris, T. N., 112
Harrison, D. C., 545
Hathaway, W. E., 73
Hayes, L. L., 87
Heart, transplantation, and local graft irradiation (rat), 176
Hemophilia, classic, connection of attempted spleen transplant (Communication), 73
Henry, W. L., 545
Hildemann, W. H., 506
Hilgert, I., 401
Histidine decarboxylase, activity on autografted and allografted skin (rats), 99
Histocompatibility
antigens, female, response to (chickens), 387
barriers, immunity induced in by cell-free tumour fractions, 49
correlation, of isoantigen rho and *R-Z* locus, 233
differences, examination of strain for determination (guinea pig) (Communication), 435
grafting, tolerance after H-2 (Communication), 73
locus, estimation of number by experiment and analysis, 12
"major" systems, estimation of alleles or loci by mixed leukocyte culture test (man), 41
skin grafts, from F_1, F_2, and F_3 generations to F_1 hosts (mice), 567
Histoincompatibility, strains, estimation of loci contributing to (mouse), 394
Homograft
kidney, change in blood flow during rejection as compared to autograft, 545
skin, effect of Cinanserin and azathioprine (mice) (Communication), 147
Homotransplantation, serotyping, kidney transplants from parental versus sibling donors, 246
Hood, B., 534
Hurvitz, D., 132
Hybrids
F_1, growth and immunocompetence of transferred cells in (mice), 87

thymectomized, effect of parental thymus grafts on, 420
Hypersensitivity, studies, with modified capillary migration culture system, 242

Immunity
in histocompatibility barriers, induced by cell-free tumour fractions, 49
skin grafts, effect of gonads and adrenal glands on, 105
skin transplant, immunological response in (hagfish), 506
transplantation, transfer by ribonucleic acid (Communication), 296
Immunocompetence
spleen, cells transferred in parent and F_1 hybrids (mice), 87
thymus-marrow, cells transferred in parent and F_1 hybrids (mice), 87
Immunodepression, effect with resistance, during graft-versus-host reaction (mice), 484
Immunosuppression
activity of allogeneic antilymphocyte serum (rat), 122
by ara-cytidine (cytarabine), 183
kidney transplantation, effect in siblings (Communication), 444
Inactivation, stem cells, after transplantation of haemopoietic or lymphoid cells of different genotypes, 165
Incompatibility, skin grafts, importance of target size in destruction, 372
Inhibition, mutual, and bidirectional in vitro mixed leukocyte reaction, 155
Injection
intradermal, cells from irradiated syngeneic donors (mice) (Communication), 215
rabbit serum, effect of on rabbit antirat lymphocyte serum, 59
Irradiation
effect of exposure rates, transplantation of allogeneic and xenogeneic marrow (rats to mice), 259
kidney capsule, development of blastocysts under (mouse in rat) (Communication), 437
local graft, heart transplant (rat), 176
preoperative extracorporeal, blood, effect in renal transplantation (man), 534
syngeneic donors, cutaneous reaction after injection (mice) (Communication), 215
Isoantibodies, littermate animals, production after allogeneic skin grafting (dogs), 468
Isoantigen
rho, correlation of histocompatibility with *R-Z* locus, 233
θ-C3H, cytotoxic isoantisera antibodies (mice), 132
Isoantisera, cytotoxic, formation of antibodies against θ-C3H isoantigen, 132
Isohemagglutinins, estimation of, by microassay (mouse) (Communication), 294

Jensen, E., 444
Joel, D. D., 459

Kano, K., 281
Kelly, R., 242
Kidney
allografts
effect of cytosine arabinoside on (dogs) (Communication), 210
relation of anti-γ-globulin antibodies and transplantation antibodies in recipients (man), 281
survival after pretreatment with antigen (dogs), 360
autograft and homograft, comparison of change in blood flow during rejection, 545
autotransplant, degeneration and regeneration of adrenergic nerves (Communication), 218
capsule, development of blastocysts under (mouse in rats) (Communication), 437
leukocyte typing, effect of blood transfusions on, 424
transplantation
analysis of parental versus sibling donors for homotransplantation, 246
effect of irradiation of blood on (man), 534
in siblings and effect of immunosuppression (Communication), 444
Kimball, J. W., 303
Kinneart, P., 360
Knight, P. R., 347
Kountz, S. L., 545
Kozaki, M., 468
Krsiakova, M., 443

LaPlante, E. S., 67
Lappé, M. A., 105, 372
Lattes, R. G., 439
Lawrence, H. S., 299
Leucocytes, analysis of groups (man), 315
Leukocytes
  antigens, effect of blood transfusion on typing by lymphocytotoxicity, 424
  bridges, in endothelial cells in skin allografts (Communication), 439
  culture test, use in estimating alleles or loci in "major" histocompatibility systems (man), 41
  reaction in vitro, as mutual inhibitory phenomenon, 155
Leukocyte typing
  donor-recipient pairs, relation to allograft survival, 188
  effect of blood transfusions on, 424
Lindsey, E. S., 59, 122, 176
Locus
  estimation, contributing to histoincompatibility in strains (mouse), 394
  histocompatibility
    correlation of isoantigen rho and *R-Z*, 233
    estimation of number by experiment and analysis, 12
  "major" histocompatibility systems, estimation of by mixed leukocyte culture test (man), 41
  non-*H-2*, differing in donor and recipient and effect on resistance to skin grafts induced by cell extracts (mouse), 401
Lymph cells, cytoxicity, nature following antigenic challenge, 194
Lymphocytes
  committed, effect in rejection of skin allografts, 459
  rabbit antirat serum, effect of injection of rabbit serum on, 59
  serum, antimouse, comparison with thymocyte after different preparations, 522
  study of rabbit antimouse serum effect (mouse), 303
Lymphocytotoxicity, leukocyte typing, effect of blood transfusions on, 424
Lymphoid cells
  decreased multiplication in the post-thymectomy state, 1
  transplantation, effect on inactivation of stem cells, 165

MacQueen, M., 220
Manvko, V. M., 165
Marchioro, T. L., 73
Marrow
  bone, transplantation after cyclophosphamide (dogs), 378
  grafts, allogeneic and xenogeneic as affected by radiation exposure rates (rats to mice), 259
  immunocompetence, transferred in parent and F_1 hybrids (mice), 87
Marshall, V. R., 347
MEETINGS
  American Society for Head and Neck Surgery, 86, 154
  Plastic Surgery Research Council, 86, 154, 209
6-Mercaptopurine, failure to prolong graft survival (mice), 498
Merritt, K., 562
Meuwissen, H. J., 1
Mickelson, M. M., 183
Mickey, M. R., 246
Microassay, for estimation, of isohemagglutinins (mouse) (Communication), 294
Migration, capillary, culture system for delayed hypersensitivity studies, 242
Milgrom, F., 281
Mitchell, M. S., 294
Mobraaten, L. E., 394, 567
Monaco, A. P., 73, 291
Moore, T. C., 99
Morris, P. J., 424
Mull, M. M., 73
Multiplication, of lymphoid cells in the post-thymectomy state, 1
Murray, J. E., 210

Nerves, adrenergic, degeneration and regeneration in kidney (Communication), 218
Norvell, J. E., 218

Obstruction, biliary, effect on skin allograft survival (mice) (Communication), 576
Ogburn, C. A., 112
Ono, K., 59, 122, 176

Panteleyev, E. I., 165
Pearl, J. S., 439
Perper, R. J., 183
Persson, B., 534
Petrov, R. V., 165
Pilch, Y. H., 296

Plaque test, hemolytic antibody, use in estimating antilymphocyte serum, 112
Playfair, J. H. L., 443
Pneumothorax, controlled, facilitation of thymectomy (Communication), 228
Popp, D. M., 233
Pouch, young animals, akin allograft studies in (opossum), 67
Pregnancy, formation of antibodies during, 562
Prehn, R. T., 225

Quint, J., 223

Rabbat, A. G., 576
Raju, S., 475
Ramming, K. P., 296
Rauch, H. C., 435
Reaction
  cutaneous, after injection from irradiated syngeneic donors (mice) (Communication), 215
  leukocyte, in vitro, as inhibitory phenomenon, 155
Recipients, leukocyte typing with donors, relation to allograft survival, 188
Regeneration, adrenergic nerves, in autotransplanted kidney (Communication), 218
Rejection
  allografts
    effect of tumor ribonucleic acid, 142
    skin, role of committed lymphocytes in, 459
  grafts, detection of antibodies after (mouse) (Communication), 299
  kidney, autograft and homograft, comparison of change in blood flow during, 545
  xenografts, skin, (*Urodela*), 332
Resistance
  antibacterial, and immunodepression during graft-versus-host reaction (mice), 484
  skin grafts, induced by cell extracts in recipients differing from donor at non-*H-2* loci (mouse), 401
Response, immunological, effect of skin transplant immunity (hagfish), 506
Reticuloendothelial system, effect of skin allografts on, 347
Ribonucleic acid
  transfer of immunity by (Communication), 296
  tumor, effect on allograft rejection, 142
Rigby, P. G., 142
Rippin, A., 360
Robison, S. L., 545
Rosengren, B., 534
Rubin, A. L., 147
Rudolph, R. H., 378
Rupp, E. M., 155
Russell, P. S., 291

Sakai, A., 444
Schayer, R. W., 99
Schiffer, L. M., 459
Schlesinger, M., 132
Schnappauf, H., 459
Schwartz, G. H., 147
Selwood, N. H., 315
Sensitization, eye allografts, and vascularization after implant (rabbit), 475
Serotyping, homotransplantation, kidney transplants from parental versus sibling donors, 246
Serum
  antilymphocyte
    allogeneic, immunosuppressive activity of (rats), 122
    estimated by hemolytic antibody plaque test, 112
  lymphocyte and thymocyte, antimouse, comparison of after different preparations, 522
  rabbit, effect of injection on rabbit antirat lymphocyte serum, 59
  rabbit antimouse antilymphocyte, estimated by hemolytic antibody plaque test, 112
  rabbit antirat lymphocyte, effect of injection of rabbit serum on, 59
Seslavina, L. S., 165
Severson, C. D., 447
Simmons, E. L., 447
Simonsen, M., 444
Singal, D. P., 246
Skin
  allogeneic grafts, production of isoantibodies after (dogs), 468
  allografts
    activity of histidine decarboxylase on (rats), 99
    effect of biliary obstruction on survival (mice) (Communication), 576
    effect of committed lymphocytes in rejection, 459
    effect on reticuloendothelial system, 347
    endothelial cell as leukocyte bridges (Communication), 439

Skin—*Continued*
failure of 6-mercaptopurine to prolong survival (mice), 498
prolongation of survival by antiserum to calf thymosin (mice) (Communication), 223
studies in pouch young (opossum), 67
survival related to donor-recipient leukocyte typing, 188
autografts, activity of histidine decarboxylase on (rats), 99
destruction of grafts, importance of target size in, 372
histocompatibility of grafts, from F_1, F_2, and F_3 generations to F_1 host (mice), 567
homografts, prolongation of by Cinanserin and azathioprine (mice) (Communication), 147
immunity of graft, immunological response (hagfish) 506
resistance to grafts, induced by cell extracts in recipients differing from donor at non-*H-2* loci (mouse), 401
response to grafts, effect of gonads and adrenal glands on, 105
xenografts
(rabbits to rats), 274
rejection (*Urodela*), 332
Snell, G. D., 105, 372, 401
Specificity
HL-A, relation to species antigen (man), 554
leukocyte typing, donor-recipient relation to allograft survival, 188
Spiro, D., 439
Spleen
immunocompetence, cells transferred in parent and F_1 hybrids (mice), 87
transplant, connection with classic hemophilia (Communication), 73
Splenomegaly, syngeneic (mouse) (Communication), 443
Starzl, T. E., 73
State, D., 223
Stem cells, inactivation, after transplantation of haemopoietic or lymphoid cells of different genotypes, 165
Stenzel, K. H., 147
Stewart, P. B., 498
Stocker, J. W., 424
Storb, R., 378
Stutman, O., 420
Survival
allografts
relation to donor-recipient leukocyte typing, 188
renal, after pretreatment with antigen (dogs), 360
skin, effect of biliary obstruction in (mice) (Communication), 576
prolongation
failure of 6-mercaptopurine in (mice), 498
of skin allografts by antiserum to calf thymosin (mice) (Communication), 223
of skin homografts with Cinanserin and azathioprine (mice) (Communication), 147
System. *See* the particular type.

Target, size, importance in destruction of skin grafts, 372
Taylor, D. L., 67
Terasaki, P. I., 246
Test. *See* the specific type.
Thoenes, G. H., 506
Thomas, E. D., 378
Thompson, J. S., 447
Thymectomy
decrease of lymphoid cell multiplication after, 1
facilitation, by controlled pneumothorax (Communication), 228
neonatal hybrids, effect of parental thymus grafts on, 420
Thymocyte serum, antimouse, comparison with lymphocyte after different preparations, 522
Thymosin, calf, antiserum and relation to allograft survival (mice) (Communication), 223
Thymus
immunocompetence, transferred in parent and F_1 hybrids (mice), 87
parental graft, effect in neonatally thymectomized hybrids, 420
Tiilikainen, A., 220
Timmermans, A., 437
Ting, A., 424
Tolerance
after transiently placed H-2 grafts (Communication), 73
mutual, effect of donor strain and unresponsiveness during secondary disease, 447
Transplantation. *See* the specific organ or type.

Tumor, ribonucleic acid, effect on allograft rejection, 142
Tumour, fractions, use for inducing immunity in histocompatibility barriers, 49

Uhlschmid, G. K., 274
Unresponsiveness, during secondary disease, effect of donor strain on mutual tolerance, 447

Van Alten, P. A., 1
Vascularization, eye allografts, and sensitization after implant (rabbit), 475
Vodopick, H. A., 155
Vriesendorp, H. M., 522

Wagar, R. D., 303
Walford, R. L., 188
Wallace, J. H., 59, 122
Ward, E. N., 303
Watkins, E., Jr., 228
Watne, A. L., 67
Weitsen, H. A., 218
Wiener, J., 439
Wilson, R. E., 360
Wolf, A., 49, 194
Wood, M. L., 522
Woodruff, M. F. A., 290

Xenogeneic grafts, marrow, effect of radiation exposure rates (rats to mice), 259
Xenografts
  skin
    (rabbits to rats), 274
    rejection (*Urodela*), 332

Yunis, E. J., 420

Zeilmaker, G. H., 437
Zimmermann, B., 67
Zukowski, C. F., 183

Copyright © 1969, The Williams & Wilkins Company

CONTENTS OF VOLUME 7

No. 1, January 1969

ARTICLES

Decreased lymphoid cell multiplication in the post-thymectomy state. H. J. Meuwissen, P. A. Van Alten, and R. A. Good 1
Estimation of the number of histocompatibility loci in laboratory animals. R. C. Elandt-Johnson 12
Applications of the mixed leukocyte culture test to estimation of the number of alleles or loci in the "major" histocompatibility systems in man. R. C. Elandt-Johnson 41
The activity of cell-free tumour fractions in inducing immunity across a weak histocompatibility barrier. A. Wolf 49
Effect of prior injection of rabbit serum on efficacy of rabbit anti-rat lymphocyte serum. K. Ono, C. W. DeWitt, J. H. Wallace, and E. S. Lindsey 59
Skin allograft studies in the pouch young of the opossum. E. S. LaPlante, R. Burrell, A. L. Watne, D. L. Taylor, and B. Zimmermann 67

BRIEF COMMUNICATIONS

Tolerance after transiently placed H-2 grafts. A. P. Monaco and D. J. Franco 73
Attempted spleen transplant in classical hemophilia. W. E. Hathaway, M. M. Mull, J. H. Githens, C. G. Groth, T. L. Marchioro, and T. E. Starzl 73
EDITORIAL 76
ABSTRACTS 77
BOOK REVIEW 85
FORTHCOMING MEETINGS 86
ERRATUM 86

No. 2, February 1969

ARTICLES

Thymus-marrow immunocompetence. IV. The growth and immunocompetence of transferred marrow, thymus, and spleen cells in parent and F_1 hybrid mice. H. N. Claman, E. A. Chaperon, and L. L. Hayes 87
Histidine decarboxylase activity of autografted and allografted rat skin. T. C. Moore and R. W. Schayer 99
The influence of the gonads and adrenal glands on the immune response to skin grafts. R. J. Graff, M. A. Lappé, and G. D. Snell 105
Suppressive antibody in heterologous anti-lymphocytic serum estimated in vitro by the hemolytic antibody plaque test. Species-specific and strain-specific antibodies in rabbit anti-mouse anti-lymphocytic sera. C. A. Ogburn, T. N. Harris, and S. Harris 112
Immunosuppressive activity of allogeneic anti-lymphocyte serum in the rat. K. Ono, C. W. DeWitt, J. H. Wallace, and E. S. Lindsey 122
Characterization of cytotoxic isoantisera produced in RIII mice. I. Demonstration of antibodies against the θ-C3H isoantigen. M. Schlesinger and D. Hurvitz ... 132
The delay of allograft rejection by "tumor" ribonucleic acid. P. G. Rigby 142

BRIEF COMMUNICATIONS

Prolongation of survival of skin homografts in mice with Cinanserin alone and in combination with azathioprine. E. P. Ambinder, G. H. Schwartz, A. L. Rubin, and K. H. Stenzel 147

ABSTRACTS 150
FORTHCOMING MEETINGS 154

No. 3, March 1969

ARTICLES

The bidirectional in vitro mixed leukocyte reaction: a mutual inhibitory phenomenon? H. A. Vodopick, E. M. Rupp, and N. Gengozian 155
Inactivation of stem cells after transplantation of mixtures of haemopoietic or lymphoid cells of different genotypes. R. V. Petrov, V. M. Manyko, E. I. Panteleyev, and L. S. Seslavina 165
Transplanted rat heart: local graft irradiation. K. Ono, E. S. Lindsey, and O. Creech, Jr. 176
The immunosuppressive activity of ara-cytidine (cytarabine). G. D. Gray, R. J. Perper, M. M. Mickelson, J. A. Crim, and C. F. Zukowski 183
Retrospective leukocyte typing of unrelated human donor-recipient pairs in relation to skin allograft survival times. R. L. Walford, J. Colombani, and J. Dausset. 188
The nature of the cytotoxic cells in lymph following primary antigenic challenge. S. Denham, J. G. Hall, A. Wolf, and P. Alexander 194
ABSTRACTS 204
FORTHCOMING MEETING 209

BRIEF COMMUNICATIONS

The effects of cytosine arabinoside on canine renal allografts. J. L. Alexander, T. C. Hall, A. G. Diethelm, and J. E. Murray 210
Cutaneous reactions in mice injected intradermally with cells from heavily irradiated syngeneic donors. N. Allegretti and D. Dekaris 215
Degeneration and regeneration of adrenergic nerves in the autotransplanted kidney. J. E. Norvell, H. A. Weitsen, and J. J. Dwyer 218
A simple micro cytotoxicity test. D. B. Amos, H. Bashir, W. Boyle, M. MacQueen, and A. Tiilikainen 220
Prolongation of skin allograft survival in mice by an antiserum to calf thymosin. M. A. Hardy, J. Quint, and D. State 223
An improved design for general purpose diffusion chambers. G. L. Bartlett and R. T. Prehn 225
Facilitation of complete thymectomy by controlled pneumothorax. A. Choudhury and E. Watkins, Jr. 228

No. 4, April 1969

ARTICLES

Histocompatibility-14: correlation of the isoantigen rho and *R-Z* locus. D. M. Popp. 233
Delayed hypersensitivity studies with a modified capillary migration culture system. H. Bartfeld, T. Atoynatan, and R. Kelly 242
Serotyping for homotransplantation. XXIII. Analysis of kidney transplants from parental versus sibling donors. D. P. Singal, M. R. Mickey, and P. I. Terasaki. 246
Transplantation of allogeneic and xenogeneic (rat) marrow in irradiated mice as affected by radiation exposure rates. N. Gengozian, D. E. Carlson, and E. M. Allen 259
Massive rabbit skin xenografts in rats. D. L. Ballantyne, Jr., G. K. Uhlschmid, and J. M. Converse 274
Relation of anti-γ-globulin antibodies to transplantation antibodies in human renal allograft recipients. K. Kano and F. Milgrom 281

LETTER TO THE EDITOR

In reference to Davies et al. M. F. A. Woodruff 290

BRIEF COMMUNICATIONS

Antilymphocyte serum and cell-free antigen loading. W. M. Abbott, A. P. Monaco, and P. S. Russell 291
Simplified estimation of mouse isohemagglutinins by microassay. M. S. Mitchell, J. R. Bove, and P. Calabresi 294
Transfer of transplantation immunity by ribonucleic acid. K. P. Ramming and Y. H. Pilch 296
A method for the detection of antibodies in mice following graft rejection. J. R. David, A. Al-Askari, and H. S. Lawrence 299

No. 5, May 1969

ARTICLES

A histological and immunological study of the effect of rabbit anti-mouse lymphocyte serum in BALB/c mice. C. D. Baroni, J. W. Kimball, E. N. Ward, and R. D. Wagar 303
Data analysis for leucocyte groups in man. N. H. Selwood 315
Chronic skin graft rejection in the *Urodela*. II. A comparative study of xenograft rejection. N. Cohen 332
The effect of skin allografts on the reticuloendothelial system. V. R. Marshall and P. R. Knight 347
Prolonged canine renal allograft survival after pretreatment with solubilized antigen. R. E. Wilson, A. Rippin, R. K. Dagher, P. Kinneart, and G. J. Busch 360
The importance of target size in the destruction of skin grafts with non-*H-2* incompatibility. M. A. Lappé, R. G. Graff, and G. D. Snell 372
Allogeneic canine bone marrow transplantation following cyclophosphamide. R. Storb, R. B. Epstein, R. H. Rudolph, and E. D. Thomas 378
Variability of response to the female histocompatibility antigen in chickens. L. D. Bacon and J. V. Craig 387
Estimates of the number of loci contributing to the histoincompatibility between C57BL/6 and BALB/c strains of mice. D. W. Bailey and L. E. Mobraaten 394
Resistance to skin grafts induced by cell extracts in congenic strains of mice differing from the donor at various non-*H-2* loci. I. Hilgert and G. D. Snell 401
Effect of parental strain thymus grafts in neonatally thymectomized F_1 hybrids. O. Stutman, E. J. Yunis, and R. A. Good 420
Leukocyte antigens in renal transplantation. IV. The effect of blood transfusions on leukocyte typing by lymphocytotoxicity. A. Ting, P. J. Morris, and J. W. Stocker 424
ABSTRACTS 430
BOOK REVIEW 434

BRIEF COMMUNICATIONS

Examination of an inbred guinea pig strain for weak histocompatibility differences. H. C. Rauch and W. C. Davis 435
Development of mouse blastocysts under the kidney capsule of irradiated rats. A reciprocal transfer study. G. H. Zeilmaker and A. Timmermans 437
Endothelial cell—leukocyte bridges in skin allografts. J. Wiener, J. S. Pearl, R. G. Lattes, and D. Spiro 439
Syngeneic splenomegaly in NZB and BALB/c mice. J. H. L. Playfair and M. Krsiakova 443

Kidney transplantation in siblings. Is immunosuppressive treatment invariably needed? A. SAKAI, M. SIMONSEN, and E. JENSEN 444

No. 6, JUNE 1969

ARTICLES

Studies on immunological unresponsiveness during secondary disease. III. Effect of donor strain on acquisition of mutual tolerance. J. S. THOMPSON, E. L. SIMMONS, M. K. CRAWFORD, and C. D. SEVERSON 447
Studies on lymphocytes. XII. The role of immunologically committed lymphocytes in rejecting skin allografts. A. D. CHANANA, E. P. CRONKITE, D. D. JOEL, L. M. SCHIFFER, and H. SCHNAPPAUF 459
The production of isoantibodies in littermate dogs after allogeneic skin grafting. I. COHEN and M. KOZAKI 468
Allograft implants in the anterior chamber of the eye of the rabbit. Early vascularization and sensitization of the host. S. RAJU and J. B. GROGAN 475
Increased antibacterial resistance and immunodepression during graft-versus-host reactions in mice. R. V. BLANDEN 484
Failure of 6-mercaptopurine to prolong the survival of skin allografts in mice. P. B. STEWART 498
Immunological responses of Pacific hagfish. I. Skin transplantation immunity. W. H. HILDEMANN and G. H. THOENES 506
A comparative study of heterologous antimouse lymphocyte and antimouse thymocyte sera prepared by two different immunization methods. M. L. WOOD and H. M. VRIESENDORP 522
Evaluation of preoperative extracorporeal irradiation of the blood in human renal transplantation. B. PERSSON, B. ROSENGREN, S.-E. BERGENTZ, and B. HOOD 534
Changes in pulsatile blood flow in autograft and homograft kidneys during rejection. W. L. HENRY, S. L. KOUNTZ, R. COHN, S. L. ROBISON, and D. C. HARRISON 545
The relationship between HL-A specificity and a human species antigen. J. R. BATCHELOR 554
Antibody formation during pregnancy. K. MERRITT and M. GALTON 562
Histocompatibility of skin grafts from mice of F_1, F_2, and F_3 generations on F_1 generation hosts. D. W. BAILEY and L. E. MOBRAATEN 567
ABSTRACTS 570

BRIEF COMMUNICATIONS

Effect of biliary obstruction on skin allograft survival in mice. J. G. BEAUDOIN and A. G. RABBAT 576

INDEX

Abeyounis, C. J., 466
Abstracts, 71, 194, 291, 510, 712, 894
Ackman, C. F. D., 745
Albert, E., 466
Aliminosa, K. V., 901
Alleles
  distribution, histocompatibility genes and loci of non-*H-2* (mouse), 861
  H-2, distribution of H-2 alloantigenic specificities among products of, 435
Allen, R. C., 9
Alling, D. W., 1
Allman, V., 899
Alloantibodies, immunosuppressive activity of (mouse) (Communication), 516
Alloantigens
  in vitro detection, by macrophage-inhibition technique (guinea pig), 485
  non-*H-2*, description of mu (mouse), 319
  specificities, H-2, distribution of among products of H-2 alleles, 435
  tissue, attempt to produce low-zone tolerance to, 162
Allogeneic transplantation, teeth buds, behavior and fate, simultaneous change in host and graft after, 328
Allografts
  brain, ovary, and skin, immunogenicity of (mouse), 379
  cartilage, significance of intercellular matrix in survival of, 666
  heart, rejection, effect of immunosuppression on (rat), 678
  immunogenicity, reduction of by cytotoxic drug pretreatment of donors, in renal transplantation (rat), 490
  kidney
    chronic reactions (rat), 602
    long-term survival after antithymocyte immunoglobulin (rat), 837
  lung, effect of local infusion on transplantation immunosuppression (dog) (Communication), 88
  ovary, effect of normal serum on survival (rat) (Communication), 753
  rejection
    and immunoglobulin production, in fetus (lamb) (Communication), 540
    in *Calotes versicolor* (lizard) (Communication), 307
    in *Eisenia foetida*, 220
    scale (skin), rejection in teleosts (*Osteoglossum bicirrhosum*), 403
  skin
    effect of regional administration on survival, in lymphatic system and antilymphocyte serum, 333
    immunological tolerance and rejection (marmoset), 653
    long-term, histological observations on (mouse) (Communication), 519
    prolongation of survival by combined treatment of chemical immunosuppressants and antilymphocyte serum, 392
    role of tissue cells in anti-A hemagglutinin formation within (rabbit), 582
  skin and heart, rejection in animals matched at major histocompatibility locus (rat) (Communication), 530
  survival, prolongation of with antimacrophage serum, 595
  teeth, immunological studies of (hamster), 91
Alvarez, C., 852
Amantadine, effects on reactivity, lymphocytes stimulated by allogeneic lymphocytes and phytohemagglutinin (man), 763
Amino acid, transport, in stored renal medulla, 558
Anderson, J. M., 88
Antibodies
  classes, biological properties in transplantation immune sera, 618
  formation
    and graft-versus-host disease, suppression of by phytohemagglutinin and examples of antigen competition, 413
    suppression of by histidine decarboxylase inhibitors, 224
  humoral, role in rejection of renal homografts (rabbit), 566
  normal serum, in cytolysis of human cells (rabbit), 813
Antigenicity
  blastocyst, masked by zona pellucida, 846
  skin and kidney, studied in transplantation model (rat), 882
  tumor-specific, simultaneous decrease with "hybrid effect" in murine

methylcholanthrene-induced sarcoma (Communication), 742
Antigens
competition, examples of in suppression of graft-versus-host disease and antibody formation by phytohemagglutinin, 413
Da6 and 6^b (Da9), relation with antigens of second sublocus of HL-A system (Letter), 739
fractionation, murine H-2, by detergents, 451
H, serological methods for detection, comparison with mixed leucocyte reaction and skin graft survival (rats), 757
histocompatibility, HL-A1, 2, 5, 7, detection of on leukocytes by simplified complement-fixation method, 383
HL-A
in serotyping for transplantation, 235
of lymphoid cells in long-term tissue culture (man), 28
injections, effect of number on effectiveness of antilymphocyte serum (Communication), 303
specific, and suppression of graft-versus-host phenomenon (Communication), 80
transplantation, and mixed leukocyte reaction (dog), 141
Antilymphocyte serum
and chemical immunosuppressants, combined treatment to prolong skin allograft survival, 392
and lymphatic system, effect of regional administration on survival of skin allografts, 333
and parabiosis, induction of specific immunological tolerance by, 356
effect
of treatment, early versus late, in immune rejection of penetrating corneal homografts as ocular immune response, 147
on lymphocytes, homologous ^{51}Cr-labeled (rat), 806
on therapy and prevention of acute secondary disease (mouse), 127
effectiveness of, effect of number of injections of antigen (Communication), 303
heterologous, influence of immunogenicity on immunosuppressive properties, 695
induction
and growth of tumor (mouse), 774
of nephritis, electron microscopic and immunohistochemical study, 545
test to measure immunosuppressive potency of (Communication), 524
Antimacrophage serum, role in prolongation of allograft survival, 595
Antiserum
heterologous, effects against subcellular lymphocyte fractions, 347
leucocyte, mono- and dispecific, computer analysis of (Communication), 204
Antoine, B., 98, 110
Argyris, B. F., 241, 538, 595
Assay, immune cytolysis, micromethod for, by release of ^{51}Cr (Communication), 526
Autoantibodies, transfer of formation, by NZB bone marrow cells (Communication), 899
Autografts, rejection, effect of prior transplantation to allogeneic and xenogeneic hosts, 121

Bach, J.-F., 110
Bach, J. F., 265
Baier, F., 347
Bain, G. O., 83
Balner, H., 206, 265, 281
Barnes, A. D., 77, 379, 519
Batson, J. S., 633
Bernard, C., 618
Billingham, R. E., 167
Bjaring, B., 38
Blastocyst, antigenicity, masked by zona pellucida, 846
Blood
ABO group, incompatibility in renal transplantation (Communication), 299
B group, and histocompatibility locus, evidence for mutational event (chicken) (Communication), 515
coagulation, relationship to platelets and fibrinolysis and effect on hyperacute rejection of renal xenografts, 152
peripheral, for collection of leukocytes or lymphocytes (man) (Communication), 535
production of graft-versus-host disease, enhancement by pertussis vaccination of donors, 462
Bone marrow
allogeneic, stored, transplantation of,

Bone marrow—*Continued*
in animals selected by histocompatibility typing (dog), 496
and lymphocyte cell mixtures, elimination of immunologically competent cells, and in vitro test for detection of (mouse and primate), 422
interaction with thymus, in transplantation immunity (Communication), 538
NZB cells, transfer of autoantibody formation (Communication), 899
BOOK REVIEWS
Autoimmunization and the autoimmune hemolytic anemias, 890
Cellular immunology, 717
Fundamental techniques of plastic surgery and their surgical applications, 890
Macrophages and immunity, 717
Self and not-self: Cellular immunology, 717
Textbook of immunopathology, 717
Boryesenko, M., 403
Boss, J. H., 121
Bratubar, C., 121
Bravo-Shugarman, M., 821
Bredt, A. B., 763
Brendel, W., 748, 806
Breyere, E. J., 502
Broersma, R. J., 152
Brunson, J. G., 305
Bull, F. G., 689
Bullemer, G., 152
Bump, S., 750
Burde, R. M., 147
Burg, C., 742
Buschbaum, H. J., 901

C′ deficiency, effect with histoincompatibility, survival of transplanted spleen cells (mouse), 189
Calotes versicolor, allograft rejection in (*lizard*) (Communication), 307
Carpenter, C. B., 545
Cartilage, allografts, significance of intercellular matrix in survival of, 666
Cell. *See* the specific type.
Cerilli, G. J., 774
Cherry, M., 319, 451
Chiampi, N. P., 516
Chimeras, radiation, enzyme activity of donor origin (mouse), 9
Chimerism, hemopoietic, in imported and laboratory-bred animals (marmoset), 633
Chromium-51
labeling, homologous lymphocytes, effect of antilymphocyte serum on (rat), 806
release of, as micromethod for assaying immune cytolysis (Communication), 526
Cinanserin, as immunosuppressant, effects on depression of lymphocyte transformation, 704
Clift, R. A., 496
Coburn, R. J., 86
Cohen, C., 582
Colberg, J. E., 582
Cole, L. J., 751
Collins, G. M., 821
Colombani, J., 383, 739, 740
Colony-forming cells, in spleen, determination of fraction transplanted, 576
Complement-fixation, method, for detection of histocompatibility antigens HL-A1, 2, 5, 7 on leukocytes, 383
Computer, analysis, of mono- and dispecific leucocyte antisera (Communication), 204
Conover, W. R., 576
Cooper, B. T., 77, 519
Cooper, E. L., 220
Costich, E. R., 91
Culture
leukocyte, mixed, growth rates of, 1
spleen cell, mixed lymphocyte reaction to and effect of presensitization on (rat), 179
tissue, long-term, HL-A antigens of lymphoid cells in (man), 28
Cytolysis
human cells, by antibodies in normal serum (rabbit), 813
immune, micromethod for assaying by release of ^{51}Cr (Communication), 526
Cytotoxic drugs, pretreatment of donors, for reduction of allograft immunogenicity, in renal transplantation (rat), 490

Dardenne, M., 265
Dausset, J., 383, 739, 740
Davies, D. A. L., 51, 740
Defendi, V., 179
dePlanque, B., 852
Dersjant, H., 281
Detection
alloantigens, by macrophage-inhibition technique (guinea pig), 485

H-antigens, serological methods for, comparison with mixed leucocyte reaction and skin graft survival (rats), 757
immunologically competent cells, bone marrow and lymphocyte cell mixtures, and elimination of (mouse and primate), 422
lymphocyte isoantigens, by homotransplantation sera (rabbit, in humans), 466
Detergents, fractionation, of murine H-2 antigens, 451
Dicke, K. A., 422
Differentiation, cellular, thymus, changes in size, antigenic character, and stem cell function during repopulation after irradiation, 783
Disease, acute secondary, effect of antilymphocyte serum on therapy and prevention (mouse), 127
Donner, M., 742
Donor
origin of enzyme activity, in radiation chimeras (mouse), 9
pertussis vaccination, for enhancement of production of graft-versus-host disease by blood, 462
pretreatment by cytotoxic drugs, for reduction of allograft immunogenicity in renal transplantation (rat), 490
Dormont, J., 265
Dossetor, J. B., 745
Drayer, B., 877
Dyminski, J. W., 595

Economou, S. G., 79
EDITORIAL, 317
Egami, N., 300
Eisenia foetida, allograft rejection in, 220
Elimination, immunologically competent cells, from bone marrow and lymphocyte cell mixtures, and in vitro test for detection of (mouse and primate), 422
Elveback, L. R., 249
Elves, M. W., 44, 757
Enhancement, by pertussis vaccination of donors, of production of graft-versus-host disease by blood, 462
Enzymes, activity, donor origin, in radiation chimeras (mouse), 9
Epinephrine, effect on prolongation of survival, skin homografts, in combination with phenothiazine derivative, propiomazine (rabbits) (Communication), 305
Epstein, R. B., 141, 496

Fateh-Moghadam, A., 748
Faulkner, H. W., 147
Feingold, N., 739
Fetus, immunoglobulin production and allograft rejection in (lamb) (Communication), 540
Fibrinolysis, relationship to platelets and blood coagulation, effect on hyperacute rejection of renal xenografts, 152
Fibrinuria, during renal transplantation, 98
Fisher, B., 303
Fisher, E. R., 303
Floersheim, G. L., 392
Formazan, production, as test for tissue viability prior to transplantation (Communication), 199
Fractionation, antigens, murine H-2, by detergents, 451
Frank, D. H., 535
Freeman, J. S., 530
Furneaux, R. W., 199

Genes, histocompatibility, distribution of alleles of non-*H-2* histocompatibility loci (mouse), 861
Genetic rules, transplantation, exceptions to (Letter), 76, 77
Gengozian, N., 633, 653
Genotypes, single, use in determination of H-2 histocompatibility specificities and their molecular individuality (mouse), 51
Gentile, J. P., 338
Gerber, P., 28
Gestation, length, amount necessary for induction of maternal tolerance, 502
Ghaffar, A., 899
Glaser, M., 753
Globulins, α_2-, renal graft rejection, effects on in vitro lymphocyte function, 689
Gordon, J., 524
Gosslee, D. G., 633
Gozzo, J. J., 338
Graff, R. J., 162, 861
Graft. *See* the specific organ or type.
Graft-versus-host
disease
and antibody formation, suppression of by phytohemagglutinin, examples of antigen competition, 413

Graft-versus-host—*Continued*
production, by whole blood, enhancement by pertussis vaccination of donors, 462
phenomenon, suppression of, by specific antigen (Communication), 80
reaction, liver infiltration in (Communication), 83
Greene, C. T., 633
Grogan, J. B., 695
Guttmann, R. D., 19, 369, 472, 490, 545, 837

Hagopian, L., 558
Haley, E. W., 91
Hallenbeck, G. A., 249
Ham, J. M., 199
Hannah, G., 88
Haplotypes, HL-A, among Japanese, in serotyping for homotransplantation, 829
Hard, R. C., Jr., 9
Hašková, V., 333
Häyry, P., 179
Heart
allografts
and skin, rejection of, in animals matched at major histocompatibility locus (rat) (Communication), 530
rejection, effect of immunosuppression on (rat), 678
Hemagglutinin, anti-A, role of tissue cells in formation in skin allografts (rabbit), 582
Henson, E. C., 305
Herberman, R. B., 813
Hered, B., 141
Heyner, S., 666
Heystek, G. A., 678
Hildemann, W. H., 76, 403, 602
Hilgert, I., 451
Histidine decarboxylase, inhibitors, effect on suppression of antibody formation, 224
Histocompatibility
antigens, HL-A1, 2, 5, 7, detection of on leukocytes by simplified complement-fixation method, 383
loci and genes, distribution of alleles of non-*H-2* (mouse), 861
locus
B, and blood group, evidence for mutational event (chicken) (Communication), 515
matching at major ones, in animals with rejection of skin and heart allografts (rat) (Communication), 530
specificities, H-2, determined by single genotypes, molecular individuality of (mouse), 51
typing, selection of animals for transplantation of stored allogeneic bone marrow (dog), 496
Histoincompatibility
strength, effect of with C′ deficiency on survival of transplanted spleen cells (mouse), 189
"weak," model of by major locus matching, in renal transplantation (rat), 369
Histuria, during renal transplantation, 110
HL-A system, second sublocus, relation of its antigens with antigens Da6 and 6^b (Da9) (Letter), 739
Holmes, E. C., 485
Homografts
corneal, penetrating, rejection of as ocular immune response and effect of early versus late treatment with antilymphocyte serum, 147
liver, method for short-term preservation, 877
reaction, mixed leucocyte reaction as an in vitro model for, 44
renal
role of humoral antibodies in rejection of (rabbit), 566
vascular patency in, determined by ultrasonic velocity detector (Letter), 296
skin
prolongation of survival induced by epinephrine and phenothiazine derivative, propiomazine (rabbits) (Communication), 305
reaction to, and tolerance responsiveness, influence of *Ag-B* locus on (rat), 167
Homologous cells, sensitized, effect on transfer of primary immune response, 215
Homotransplantation
sera, for detection of lymphocyte isoantigens (rabbit sera, in man), 466
serotyping
45-minute microcytotoxicity test, 801
HL-A haplotypes in Japanese, 829
new HL-A antigens, 235
Hopf, U., 748
Host, allogeneic and xenogeneic, prior transplantation effect on autograft rejection, 121

Hunter, R. L., 413
Hutchison, J., 88
"Hybrid effect," simultaneous decrease, with tumor-specific antigenicity in murine methylcholanthrene-induced sarcoma (Communication), 742
Hypersensitivity, delayed in vitro, by peripheral leucocytes (man) (Communication), 745

Ickowicz, M., 328
IgG, horse, in induction of immunological tolerance in adults (dog) (Communication), 748
Immunity, transplantation, interaction of thymus and bone marrow in (Communication), 538
Immunogenicity
  allografts
    brain, ovary, and skin (mouse), 379
    reduction of by cytotoxic drug pretreatment of donors, in renal transplantation (rat), 490
  influence on immunosuppressive properties, of heterologous antilymphocyte serum, 695
Immunoglobulin
  antithymocyte, long-term survival of kidney allografts after (rat), 837
  production, and allograft rejection, in fetus (lamb) (Communication), 540
Immunosuppressants
  chemical, combined treatment with antilymphocyte serum to prolong skin allograft survival, 392
  effects of Cinanserin, on depression of lymphocyte transformation, 704
Immunosuppression
  activity of alloantibodies (mouse) (Communication), 516
  effect on rejection, of heart allografts (rat), 678
  for renal transplantation, primary malignancy in patients undergoing, information request (Communication), 209
  influence of immunogenicity on, in heterologous antilymphocyte serum, 695
  potency, of antilymphocyte sera, test for measurement of (Communication), 524
  transplantation, by local infusion of lung allografts (dog) (Communication), 88
Incompatibility, ABO blood group, in renal transplantation (Communication), 299
Individuality, molecular, of H-2 histocompatibility specificities determined by single genotypes (mouse), 51
Induction
  immunological tolerance
    by horse IgG (dog) (Communication), 748
    by parabiosis and antilymphocyte serum, 356
  nephritis, by antilymphocyte serum, electron microscopic and immunohistochemical study, 545
  tolerance, maternal, length of gestation necessary for, 502
  tumor, and growth, effect of antilymphocyte serum (mouse), 774
Infection, induction of resistance to, and prolongation of skin graft survival by phytohemagglutinin, 258
Infiltration, liver, in graft-versus-host reaction (Communication), 83
Infusion, local, lung allografts, effect on transplantation immunosuppression (dog) (Communication), 88
Inhibition, in vitro rosette, by antihuman antilymphocyte serum, correlation with skin graft prolongation in subhuman primates, 265
Injections
  antigen, effect of number on effectiveness of antilymphocyte serum (Communication), 303
  lymphoid cells, different numbers and comparisons of rabbit antimouse thymus serum, 249
Irradiation
  lethal, proliferation of spleen-derived cells in thymus of animals after (mouse) (Communication), 751
  thymus, changes in size, antigenic character, and stem cell function during repopulation, 783
Isoantigens
  H-2, expression of lymphoma cells in vitro, cyclic variations in (mouse), 38
  lymphocyte, detection of by homotransplantation sera (rabbit, in man), 466
Iwahara, M., 462

James, D. A., 846
Jansen, F., 618
Japanese, HL-A haplotypes among, in

Japanese—*Continued*
serotyping for homotransplantation, 829
Jones, M., 199

Kahan, B. D., 1
Kaliss, N., 516, 526
Kandutsch, A. A., 162, 451
Kano, K., 466
Kidney
allografts
chronic reactions (rat), 602
long-term survival after antithymocyte immunoglobulin (rat), 837
antigenicity, and skin, studied in transplantation model (rat), 882
homografts
role of humoral antibodies in rejection of (rabbit), 566
vascular patency in, determined by ultrasonic velocity detector (Letter), 296
medulla, stored, amino acid transport in, 558
preservation, 12-hr storage and air transport, 821
preservation of growth, compensatory, in thymectomized animals (mouse) (Communication), 750
rejection of graft, α_2-globulins in, effects on in vitro lymphocyte function, 689
transplantation
ABO blood group incompatibility in (Communication), 299
fibrinuria during, 98
hematopoietic origin of an immunogenic stimulus of rejection (rat), 472
histuria during, 110
model of "weak histoincompatibility" by major locus matching (rat), 369
primary malignancy in patients undergoing immunosuppression for, information request (Communication), 209
quantitation of cell proliferation during unmodified rejection (rat), 19
reduction of allograft immunogenicity by cytotoxic drug pretreatment of donors (rat), 490
varicella, fatality report (Communication), 899
xenografts, hyperacute rejection of, relationship and effect of platelets, blood coagulation, and fibrinolysis on, 152
Kidney cells, and lymphocytes, comparative typing by immune adherence (man), 852
KIDNEY TRANSPLANT REGISTRY, 721
Kinsky, R., 618
Klassen, J., 566
Klein, G., 38
Kolc, J., 333
Křen, V., 200
Kretchmar, A. L., 576
Krugmire, R. B., Jr., 296
Kukita, Y., 300
Kullgren, B., 9

Lamoureux, G., 524
Land, W., 748
Lawrence, W., Jr., 224
Ledney, G. D., 127
Legrand, L., 739
Lenaghan, R., 152
Lerner, E. M., II, 413
Leski, M., 110
Leucocytes
antisera, mono- and dispecific, computer analysis of (Communication), 204
mixed
reaction, as an in vitro model for the homograft reaction, 44
reaction, comparison with skin graft survival and serological methods of detecting H-antigens (rats), 757
peripheral, in delayed hypersensitivity in vitro (man) (Communication), 745
Leukocytes
collection, from peripheral blood (man) (Communication), 535
cultures, mixed, growth rates of, 1
histocompatibility antigens on, HL-A1, 2, 5, 7, detection of by simplified complement-fixation method, 383
mixed, reaction and transplantation antigens (dog), 141
Levine, S., 462
Lindquist, R. R., 19, 369, 472, 490, 545, 837
Liver
homografts, method for short-term preservation, 877
infiltration, in graft-versus-host reaction (Communication), 83
Locus
Ag-B, influence on reactivity to skin homografts and tolerance responsiveness (rat), 167
histocompatibility
B, and blood group, evidence for muta-

tional event (chicken) (Communication), 515
matching at major ones, in animals with rejection of skin and heart allografts (rat) (Communication), 530
major, matching, for "weak histoincompatibility" in renal transplantation (rat), 369
Rt *H-1*, congenic resistant lines differing at (rat) (Communication), 200
Longevity, increased by reduced incidence of thymic lymphomas (mouse) (Communication), 203
Loukopoulos, D., 383
Lowenstein, L. M., 558
Lung, allografts, effect of local infusion on transplantation immunosuppression (dog) (Communication), 88
Lymphatic system, and antilymphocyte serum, effect of regional administration on survival of skin allografts, 333
Lymphocyte cell, and bone marrow mixtures, elimination of immunologically competent cells, and in vitro test for detection of (mouse and primate), 422
Lymphocyte serum, new method for production (rabbit antirat), 338
Lymphocytes
allogeneic, with phytohemagglutinin, stimulation of lymphocytes, and effects of amantadine on (man), 763
and kidney cells, comparative typing by immune adherence (man), 852
collection, from peripheral blood (man) (Communication), 535
depression of transformation, drugs in vitro, effects of immunosuppressant, Cinanserin, 704
effect on in vitro function, by α_2-globulins in renal graft rejection, 689
effect on reactivity, by amantadine, when stimulated by allogeneic lymphocytes and phytohemagglutinin (man), 763
homologous, ^{51}Cr-labeled, effect of antilymphocyte serum on (rat), 806
isoantigens, detection of by homotransplantation sera (rabbit, in man), 466
mixed, reaction, in spleen cell cultures, effect of presensitization on (rat), 179
subcellular fractions, effects of heterologous antiserum against, 347
transport of for typing (Communication), 311
Lymphoid cells
in long-term tissue culture, HL-A antigens in (man), 28
injection, different numbers and comparisons of rabbit antimouse thymus serum, 249
Lymphoma cells, in vitro, cyclic variations in H-2 isoantigenic expression in (mouse), 38
Lymphomas, thymic, effect of reduced incidence on longevity (mouse) (Communication), 203

McBride, R. A., 515
McKhann, C. F., 209
MacLean, L. D., 524
Macrophage-inhibition technique, in vitro detection of alloantigens (guinea pig), 485
Mahabir, R. N., 369
Málek, P., 333
Malignancy, primary, in patients undergoing immunosuppression for renal transplantation, information request (Communication), 209
Malmgren, R. A., 485
Malt, R., 750
Mammen, E. F., 152
Manickavel, V., 307
Marchioro, T. L., 296
Marcus, Z., 80
Mardiney, M. R., Jr., 763
Markley, K., 258
Markley, P., 258
Marquet, R. L., 678
Marrone, J., 485
Matrix, intercellular, significance in survival of cartilage allografts, 666
May, J., 299
Medulla, kidney, stored, amino acid transport in, 558
MEETINGS
American Cancer Society, 507
Czechoslovak Scientific and Technical Society, 213
International Conference on Anti-Lymphocyte Sera, 891
International Histocompatibility Conference, 315, 509, 893
Second Annual Tissue Typing Course, 213, 315
Symposium on Infections and Immunosuppression in Subhuman Primates, 509

MEETINGS—*Continued*
Symposium on Phylogeny of Transportation, 716, 893
Third International Congress of the Transplantation Society, 213, 716
Merrill, J. P., 19, 545
Methylcholanthrene, induction of sarcoma, murine, simultaneous decrease of tumor-specific antigenicity and "hybrid effect" in (Communication), 742
Mickey, M. R., 235, 801, 829
Microcytotoxicity, 45-minute test, serotyping for homotransplantation, 801
Milas, L., 215
Milgrom, F., 466, 566
Millman, R. B., 413
Mittal, K. K., 801
Mookerjee, B., 745
Moore, D. J., 9
Moore, T. C., 224
Morton, D. L., 485
Mu, description of, as non-*H-2* alloantigen (mouse), 319
Mullen, Y., 602
Mutation, evidence for, at *B* blood group-histocompatibility locus (chicken) (Communication), 515
Muthukkaruppan, VR., 307
Myers, M. W., 485

Neely, M. G., 88
Nelken, D., 121, 753
Nephritis, induced by antilymphocyte serum, electron microscopic and immunohistochemical study, 545
Neveu, T., 98, 110
Nisbet, N. W., 356
NOTE
Addendum added in proof, 889
Dr. Herbert Conway, 755

OBITUARY
Greene, Harry S. N., 543
Ockner, S. A., 472, 837
Order, S. E., 783
Oth, D., 742
Ovary, allografts, effect of normal serum on survival (rat) (Communication), 753

Parabiosis, and antilymphocyte serum, induction of specific immunological tolerance by, 356
Parshall, C. J., Jr., 540
Patency, vascular, ultrasonic velocity detector for determining, in renal homografts (Letter), 296
Peritoneal cells, adult, transplantation into newborns (mice), 241
Pertussis, vaccination of donors, for enhancement of production of graft-versus-host disease by blood, 462
Phenothiazine, propiomazine as derivative, effect in combination with epinephrine on prolongation of survival of skin homografts (rabbit) (Communication), 305
Phytohemagglutinin
effect with allogeneic lymphocytes, stimulation of lymphocytes, and effect of amantadine on reactivity (man), 763
skin grafts, in prolongation of survival and induction of resistance to infection, 258
suppression of graft-versus-host disease and antibody formation, examples of antige n competition, 413
Pinno, E., 83
Platelets, relationship to blood coagulation and fibrinolysis, effect on hyperacute rejection of renal xenografts, 152
Playfair, J. H. L., 899
Popp, I., 38
Porter, R. P., 653
Potency, immunosuppressive, of antilymphocyte sera, test for measurement of (Communication), 524
Prendergast, R. A., 540
Presensitization, effect on mixed lymphocyte reaction in spleen cell cultures (rat), 179
Production, new method for, of lymphocyte serum (rabbit antirat), 338
Proliferation, cells, quantitation of during unmodified rejection in renal transplantation (rat), 19
Prolongation
survival
allografts, with antimacrophage serum, 595
skin allograft, by combined treatment of chemical immunosuppressants and antilymphocyte serum, 392
skin grafts in immunologically tolerant animals (rat) (Communication), 901
Propiomazine, as phenothiazine derivative, effect in combination with epinephrine on prolongation of survival of skin homografts (rabbits) (Communication), 305

Quantitation, cell proliferation, during unmodified rejection in renal transplantation (rat), 19

Radiation, in chimeras, enzyme activity of donor origin (mouse), 9
Raju, S., 695
Reaction
chronic, kidney allografts (rat), 602
graft-versus-host, liver infiltration in (Communication), 83
homograft, mixed leucocyte reaction as an in vitro model for, 44
leucocytes
mixed, as an in vitro model for the homograft reaction, 44
mixed, comparison with skin graft survival and serological methods of detecting H-antigens (rats), 757
leukocytes, mixed, and transplantation antigens (dog), 141
lymphocytes, mixed, in spleen cell cultures, effect of presensitization on (rat), 179
skin homografts, and tolerance responsiveness, influence of *Ag-B* locus on (rat), 167
Reactivity, lymphocytes, stimulated by allogeneic lymphocytes and phytohemagglutinin, effects of amantadine on (man), 763
Rejection
allografts
and immunoglobulin production, in fetus (lamb) (Communication), 540
heart, effect of immunosuppression on (rat), 678
in *Calotes versicolor* (lizard) (Communication), 307
in *Eisenia foetida*, 220
scale (skin), in teleosts (*Osteoglossum bicirrhosum*), 403
skin, and immunological tolerance (marmoset), 653
skin and heart, in animals matched at major histocompatibility locus (rat), (Communication), 530
autografts, effect of prior transplantation to allogeneic and xenogeneic hosts, 121
hyperacute, of renal xenografts, relationship and effect of platelets, blood coagulation, and fibrinolysis on, 152
immune, penetrating corneal homografts as ocular response and effect of early versus late treatment with antilymphocyte serum, 147
immunogenic stimulus of, hematopoietic origin of, in renal transplantation (rat), 472
renal graft, α_2-globulins in, effects on in vitro lymphocyte function, 689
renal homografts, role of humoral antibodies in (rabbit), 566
transplanted fins, X-ray effects on, in *Oryzias latipes* (fish) (Communication), 300
unmodified, quantitation of cell proliferation in renal transplantation (rat), 19
Remington, D. W., 83
Repopulation, thymus, changes in size, antigenic character, and stem cell function after irradiation, 783
Resistance, induction, to infection, and prolongation of skin graft survival by phytohemagglutinin, 258
Response
immune
ocular, rejection of penetrating corneal homografts and effect of early versus late treatment with antilymphocyte serum, 147
primary, transfer of by homologous sensitized cells, 215
tolerance, and reaction to skin homografts, influence of *Ag-B* locus on (rat), 167
Ribak, B., 582
Riggio, R. R., 689
Rogentine, G. N., Jr., 28
Roitt, I. M., 899
Rose, R., 199
Rosenberg, B. F., 152
Rosenberg, J. C., 152
Rubilotta, L. M., 220
Rubin, A. L., 689, 704
Rudolph, R. H., 141
Rule, A. H., 338

Sakai, A., 882
Saleh, W. S., 524
Salerno, A., 189
Sarcoma, murine, methylcholanthrene-induced, simultaneous decrease of tumor-specific antigenicity and "hybrid effect" in (Communication), 742
Sazama, K. P., 502
Scale (skin), allografts, rejection in teleosts (*Osteoglossum bicirrhosum*), 403
Schalm, S. W., 877
Scheiffarth, F., 347
Schierman, L. W., 515
Schwartz, G. H., 689, 704
Seepersad, M. F., 535

Seifert, J., 748, 806
Selwood, N. H., 204
Serotyping
  homotransplantation
    45-minute microcytotoxicity test, 801
    HL-A haplotypes in Japanese, 829
    new HL-A antigens, 235
Serum
  antihuman antilymphocyte, in vitro rosette inhibition by, correlation with skin graft prolongation in subhuman primates, 265
  antihuman lymphocyte, testing of (chimpanzees and lower primates), 281
  homotransplantation, for detection of lymphocyte isoantigens (rabbit sera, in man), 466
  normal
    effect on cytolysis of human cells (rabbit), 813
    effect on survival of ovary allografts (rat) (Communication), 753
  rabbit antimouse thymus, comparisons when produced after different numbers of lymphoid cell injections, 249
  transplantation, immune, biological properties of antibody classes in, 618
Severson, C. D., 535
Sharav, Y., 328
Sheil, A. G. R., 299
Shorter, R. G., 249
Shreffler, D. C., 435
Siegel, A., 852
Silvers, W. K., 167
Silverstein, A. M., 540
Singal, D. P., 235, 829
Skin
  allografts
    and heart, rejection of, in animals matched at major histocompatibility locus (rat) (Communication), 530
    effect of regional administration on survival, in lymphatic system and antilymphocyte serum, 333
    immunological tolerance and rejection (marmoset), 653
    long-term, histological observations on (mouse), (Communication), 519
    prolongation of survival by combined treatment of chemical immunosuppressants and antilymphocyte serum, 392
    role of tissue cells in anti-A hemagglutinin formation within (rabbit), 582
    antigenicity, and kidney, studied in transplantation model (rat), 882
  grafting (monkey and ape) (Communication), 206
  homografts
    prolongation of survival induced by epinephrine and phenothiazine derivative, propiomazine (rabbits) (Communication), 305
    reaction to, and tolerance responsiveness, influence of *Ag-B* locus on (rat), 167
  prolongation of graft survival
    and induction of resistance of infection by phytohemagglutinin, 258
    comparison with mixed leucocyte reaction and serological methods of detecting H-antigens (rats), 757
    in immunologically tolerant animals (rat) (Communication), 901
    in subhuman primates, correlation with in vitro rosette inhibition by antihuman antilymphocyte serum, 265
Smallman, E., 258
Snell, G. D., 319, 435, 451, 861
Soliman, O., 303
Southam, C. M., 533, 901
Specificity
  alloantigenic, H-2, distribution of among products of H-2 alleles, 435
  H-2, determined by single genotypes, molecular individuality of (mouse), 51
Spleen
  cells
    culture, mixed lymphocyte reaction to and effect of presensitization on (rat), 179
    survival after transplantation as affected by histoincompatibility and C′ deficiency (mouse), 189
  cells derived from, proliferation of in thymus of lethally-irradiated animals (mouse) (Communication), 751
  colony-forming cells, determination of fraction transplanted, 576
  transplantation (rat) (Communication), 86
Štark, O., 200
Steinmuller, D., 530
Stenzel, K. H., 689, 704
Stewart, J. H., 299
Stimulus, immunogenic, hematopoietic origin of, in rejection of renal transplantation (rat), 472
Stokes, G., 535

Storb, R., 496
Strandness, D. E., Jr., 296
Sublocus, second of HL-A system, relation of its antigens with antigens Da6 and 6^b (Da9) (Letter), 739
Suen, W. Y., 83
Suit, H. D., 215
Suppression
  graft-versus-host disease and antibody formation, by phytohemagglutinin, examples of antigen competition, 413
  graft-versus-host phenomenon, by specific antigen (Communication), 80
Survival
  allografts
    cartilage, significance of intercellular matrix in, 666
    kidney, long-term, after antithymocyte immunoglobulin (rat), 837
    ovary, effect of normal serum on (rat) (Communication), 753
    skin, effect of regional administration on, in lymphatic system and antilymphocyte serum, 333
  prolongation
    allografts, with antimacrophage serum, 595
    skin grafts in immunologically tolerant animals (rat) (Communication), 901
    skin homografts, induced by epinephrine and phenothiazine derivative, propiomazine (rabbits) (Communication), 305
  skin grafts
    comparison with mixed leucocyte reaction and serological methods of detecting H-antigens (rats), 757
    prolongation and induction of resistance to infection by phytohemagglutinin, 258
  transplanted spleen cells, effect of histoincompatibility and C′ deficiency (mouse), 189
Sutthiwan, P., 249
System. *See* the specific type.

Teeth
  allografts, immunological studies of (hamster), 91
  buds, behavior and fate, simultaneous change in host and graft after allogeneic transplantation, 328
Terasaki, P. I., 235, 311, 801, 821, 829
Terpstra, J. L., 877
Thomas, E. D., 141, 496
Thompson, J. S., 535
Thornton, S., 258
Thymectomy
  influence, on growth of cell xenografts in newborns (human cells in rats) (Communication), 533
  preservation of compensatory renal growth after (mouse) (Communication), 750
  transsternal, technique of (dog) (Communication), 79
Thymocytes, cellular differentiation, size, antigenic character, and stem cell function during repopulation after irradiation, 783
Thymus
  cellular differentiation, size, antigenic character, and stem cell function during repopulation after irradiation, 783
  interaction with bone marrow, in transplantation immunity (Communication), 538
  lethally irradiated animals, proliferation of spleen-derived cells in (mouse) (Communication), 751
  lymphomas, effect of reduced incidence on longevity (mouse) (Communication), 203
  rabbit antimouse serum, comparisons when produced after different numbers of lymphoid cell injections, 249
Tiller, D. J., 299
Tilney, N. L., 79
Tissue. *See* the specific type.
Tissue cells, role in anti-A hemagglutinin formation in skin allografts (rabbit), 582
Tolerance
  immunological
    and rejection of skin allografts (marmoset), 653
    induced in adults by horse IgG (dog) (Communication), 748
    induction of by parabiosis and antilymphocyte serum, 356
  low-zone, to tissue alloantigens, attempt to produce, 162
  maternal, induction of, length of gestation necessary for, 502
  responsiveness, and reaction to skin homografts, influence of *Ag-B* locus on (rat), 167

Transformation, lymphocytes, depression by drugs in vitro, effects of immunosuppressant, Cinanserin, 704
Transplantation. *See* the specific organ or type.
Treat, R. C., 774
Tridente, G., 422
Tumor
  antigenicity specific for, simultaneous decrease with "hybrid effect" in murine methylcholanthrene-induced sarcoma (Communication), 742
  induction and growth, effect of antilymphocyte serum (mouse), 774
Tyan, M. L., 751

Uhse, H. G., 311
Uphoff, D. E., 203

Vaccination, pertussis, of donors, for enhancement of production of graft-versus-host disease by blood, 462
van Bekkum, D. W., 281, 422, 678
van den Berg, C., 877
Variations, cyclic, H-2 isoantigenic expression of lymphoma cells in vitro (mouse), 38
Varicella, kidney transplantation, fatality report (Communication), 899
Velocity, ultrasonic, detector for determining vascular patency in renal homografts (Letter), 296
Veltkamp, J. J., 877
Viability, tissue, prior to transplantation, as measured by formazan production (Communication), 199
Virolainen, M., 179
Viza, D. C., 740
Voisin, G. A., 618

Waksman, B. H., 783
Waltman, S. R., 147
Ward, P. D., 98
Warnatz, H., 347
Weinreb, M. M., 328
White, E., 602
Williams, G. M., 852
Witz, I. P., 516
Woodruff, Sir Michael, reply to (Letter), 740

X-ray, effects on rejection of transplanted fins in *Oryzias latipes* (fish) (Communication), 300
Xenografts
  cells, growth in newborns, influence of thymectomy on (human cells in rats) (Communication), 533
  kidney, hyperacute rejection of, relationship and effect of platelets, blood coagulation, and fibrinolysis on, 152

Yee, C. L., 485

Zástava, V., 333
Zawadzki, Z., 303
Zona pellucida, masking of blastocyst antigenicity, 846
Zukoski, C. F., 899

Contents of Volume 8

No. 1, July 1969

ARTICLES

Growth rates of mixed leukocyte cultures. D. W. Alling and B. D. Kahan 1
Enzyme activity of donor origin in mouse radiation chimeras. R. C. Hard, Jr., R. C. Allen, D. J. Moore, and B. Kullgren 9
Renal transplantation in the inbred rat. VIII. Quantitation of cell proliferation during unmodified rejection. R. D. Guttmann, R. R. Lindquist, and J. P. Merrill 19
HL-A antigens of human lymphoid cells in long-term tissue culture. G. N. Rogentine, Jr., and P. Gerber 28
Cyclic variations in the H-2 isoantigenic expression of mouse lymphoma cells in vitro. B. Bjaring, G. Klein, and I. Popp 38
The mixed leucocyte reaction. An in vitro model for the homograft reaction. M. W. Elves 44
The molecular individuality of different mouse H-2 histocompatibility specificities determined by single genotypes. D. A. L. Davies 51
ABSTRACTS 71

LETTERS TO THE EDITOR

Exceptions to the genetic rules of transplantation. W. H. Hildemann 76
Exceptions to the genetic rules of transplantation. A. D. Barnes and B. T. Cooper. 77

BRIEF COMMUNICATIONS

The technique of transsternal thymectomy in the puppy. N. L. Tilney and S. G. Economou 79
Suppression of graft-versus-host phenomenon by specific antigen. Z. Marcus 80
Liver infiltration in the graft-versus-host reaction. G. O. Bain, W. Y. Suen, D. W. Remington, and E. Pinno 83
Spleen transplantation in the rat. R. J. Coburn 86
Transplantation immunosuppression by local infusion of allografts of canine lung. J. M. Anderson, G. Hannah, M. G. Neely, and J. Hutchison 88

No. 2, August 1969

ARTICLES

Immunological studies of allografts of teeth in inbred hamsters. E. W. Haley and E. R. Costich 91
Fibrinuria during renal transplantation. B. Antoine, T. Neveu, and P. D. Ward ... 98
Histuria during renal transplantation. B. Antoine, T. Neveu, M. Leski, and J.-F. Bach 110
Autograft rejection. I. Effect of prior transplantation to allogeneic and xenogeneic hosts. C. Brautbar, D. Nelken, and J. H. Boss 121
Antilymphocyte serum in the therapy and prevention of acute secondary disease in mice. G. D. Ledney 127
Canine mixed leukocyte reactivity and transplantation antigens. R. H. Rudolph, B. Hered, R. B. Epstein, and E. D. Thomas 141
The ocular immune response. II. Immune rejection of penetrating corneal homografts. Early versus late treatment with antilymphocyte serum. S. R. Waltman, R. M. Burde, and H. W. Faulkner 147

Relationship of platelets, blood coagulation, and fibrinolysis to hyperacute rejection of renal xenografts. J. C. Rosenberg, R. J. Broersma, G. Bullemer, E. F. Mammen, R. Lenaghan, and B. F. Rosenberg. 152
An attempt to produce low-zone tolerance to tissue alloantigens. R. J. Graff and A. A. Kandutsch. 162
Influence of the *Ag-B* locus on reactivity to skin homografts and tolerance responsiveness in rats. W. K. Silvers and R. E. Billingham. 167
Effect of presensitization on the mixed lymphocyte reaction of rat spleen cell cultures. M. Virolainen, P. Häyry, and V. Defendi. 179
Survival of transplanted spleen cells in allogeneic mice. The effects of strength of histoincompatibility and of C′ deficiency. A. Salerno. 189
ABSTRACTS. 194

BRIEF COMMUNICATIONS

Formazan production: test for tissue viability prior to transplantation. J. M. Ham, R. W. Furneaux, M. Jones, and R. Rose. 199
Five congenic resistant lines of rats differing at the Rt *H-1* locus. O. Štark and V. Křen. 200
Longevity of AKR mice increased by reduced incidence of thymic lymphomas. A preliminary report. D. E. Uphoff. 203
Computer analysis of mono- and dispecific leucocyte isoantisera. N. H. Selwood. . . 204
Skin grafting in monkeys and apes. H. Balner. 206
Primary malignancy in patients undergoing immunosuppression for renal transplantation. A request for information. C. F. McKhann. 209
FORTHCOMING MEETINGS. 213

No. 3, September 1969

ARTICLES

Transfer of a primary immune response by homologous sensitized cells. L. Milas and H. D. Suit. 215
Allograft rejection in *Eisenia foetida*. E. L. Cooper and L. M. Rubilotta. 220
Suppression of antibody formation by histidine decarboxylase inhibitors. T. C. Moore and W. Lawrence, Jr. 224
Serotyping for homotransplantation. XXIX. Two new HL-A antigens. D. P. Singal, M. R. Mickey, and P. I. Terasaki. 235
Transplantation of adult peritoneal cells into newborn mice. B. F. Argyris. 241
Comparison of rabbit antimouse thymus sera produced after different numbers of injections of lymphoid cells. P. Sutthiwan, R. G. Shorter, G. A. Hallenbeck, and L. R. Elveback. 249
Prolongation of skin graft survival and induction of resistance to infection by phytohemagglutinin. K. Markley, S. Thornton, E. Smallman, and P. Markley. 258
In vitro rosette inhibition by antihuman antilymphocyte serum. Correlation with skin graft prolongation in subhuman primates. J. F. Bach, J. Dormont, M. Dardenne, and H. Balner. 265
Testing of antihuman lymphocyte sera in chimpanzees and lower primates. H. Balner, H. Dersjant, and D. W. van Bekkum. 281
ABSTRACTS. 291

LETTER TO EDITOR

The ultrasonic velocity detector for determining vascular patency in renal homografts. T. L. Marchioro, D. E. Strandness, Jr., and R. B. Krugmire, Jr. 296

BRIEF COMMUNICATIONS

ABO blood group incompatibility in renal transplantation. A. G. R. Sheil, J. H. Stewart, D. J. Tiller, and J. May 299
X-ray effects on rejection of transplanted fins in the fish, *Oryzias latipes*. N. Egami and Y. Kukita 300
Effect of the number of injections of antigen on the effectiveness of antilymphocyte serum. B. Fisher, O. Soliman, Z. Zawadzki, and E. R. Fisher 303
Prolongation of skin homograft survival in rabbits induced by a combination of epinephrine and a phenothiazine derivative, propiomazine. E. C. Henson and J. G. Brunson 305
Allograft rejection in the lizard *Calotes versicolor*. V. Manickavel and VR. Muthukkaruppan 307
Transport of lymphocytes for typing. H. G. Uhse and P. I. Terasaki 311
FORTHCOMING MEETINGS 315

No. 4, October 1969

EDITORIAL 317

ARTICLES

A description of mu: a non-*H-2* alloantigen in C3H/Sn mice. M. Cherry and G. D. Snell 319
Behavior and fate of transplanted tooth buds. III. A simultaneous change in host and graft after allogeneic transplantation. Y. Sharav, M. M. Weinreb, and M. Ickowicz 328
Antilymphocyte serum and lymphatic system. I. The effect of regional administration on the survival of skin allografts. P. Málek, J. Kolc, V. Hašková, and V. Zástava 333
A new method for the production of rabbit antirat lymphocyte serum. J. J. Gozzo, A. H. Rule, and J. P. Gentile 338
Studies on the effects of heterologous antisera against subcellular lymphocyte fractions. H. Warnatz, F. Scheiffarth, and F. Baier 347
Induction of specific immunological tolerance by parabiosis and antilymphocyte serum. N. W. Nisbet 356
Renal transplantation in the inbred rat. X. A model of "weak histoincompatibility" by major locus matching. R. N. Mahabir, R. D. Guttmann, and R. R. Lindquist 369
The immunogenicity of brain, ovary, and skin allografts in mice. A. D. Barnes 379
Detection of histocompatibility antigens HL-A1, 2, 5, and 7 on leukocytes by a simplified complement-fixation method. D. Loukopoulos, J. Colombani, and J. Dausset 383
A study of combined treatment with chemical immunosuppressants and antilymphocytic serum to prolong skin allograft survival. G. L. Floersheim 392
Scale (skin) allograft rejection in the primitive teleost, *Osteoglossum bicirrhosum*. M. Boryesenko and W. H. Hildemann 403
Suppression of graft-versus-host disease and antibody formation by phytohemagglutinin. Examples of antigen competition. R. L. Hunter, R. B. Millman, and E. M. Lerner, II 413
The selective elimination of immunologically competent cells from bone marrow and lymphocyte cell mixtures. III. In vitro test for detection of immunocompetent cells in fractionated mouse spleen cell suspensions and primate bone marrow suspensions. K. A. Dicke, G. Tridente, and D. W. van Bekkum 422
The distribution of thirteen H-2 alloantigenic specificities among the products of eighteen H-2 alleles. D. C. Shreffler and G. D. Snell 435
Fractionation of murine H-2 antigens with the use of detergents. I. Hilgert, A. A. Kandutsch, M. Cherry, and G. D. Snell 451

Graft-versus-host disease produced with whole blood. Enhancement by pertussis vaccination of donors. S. LEVINE AND M. IWAHARA 462
Detection of human lymphocyte isoantigens by rabbit homotransplantation sera. E. ALBERT, K. KANO, C. J. ABEYOUNIS, AND F. MILGROM 466
Renal transplantation in the inbred rat. IX. Hematopoietic origin of an immunogenic stimulus of rejection. R. D. GUTTMANN, R. R. LINDQUIST, AND S. A. OCKNER 472
In vitro detection of guinea pig alloantigens by the macrophage-inhibition technique. R. A. MALMGREN, E. C. HOLMES, D. L. MORTON, C. L. YEE, J. MARRONE, AND M. W. MYERS 485
Renal transplantation in the inbred rat. XI. Reduction of allograft immunogenicity by cytotoxic drug pretreatment of donors. R. D. GUTTMANN AND R. R. LINDQUIST. 490
Transplantation of stored allogeneic bone marrow in dogs selected by histocompatibility typing. R. B. EPSTEIN, R. STORB, R. A. CLIFT, AND E. D. THOMAS 496
Length of gestation necessary for induction of maternal tolerance. K. P. SAZAMA AND E. J. BREYERE 502
PAST MEETINGS 507
FORTHCOMING MEETINGS 509
ABSTRACTS 510

BRIEF COMMUNICATIONS

Evidence for a mutational event at the *B* blood group-histocompatibility locus in chickens. L. W. SCHIERMAN AND R. A. MCBRIDE 515
Immunosuppressive activity of mouse alloantibodies. I. P. WITZ, N. P. CHIAMPI, AND N. KALISS 516
Histological observations on long-term skin allografts in mice. A. D. BARNES AND B. T. COOPER 519
A test to measure the immunosuppressive potency of antilymphocyte sera. W. S. SALEH, L. D. MACLEAN, J. GORDON, AND G. LAMOUREUX 524
Micromethod for assaying immune cytolysis by the release of ^{51}Cr. N. KALISS 526
Acute rejection of skin and heart allografts in rats matched at the major rat histocompatibility locus. J. S. FREEMAN AND D. STEINMULLER 530
Influence of thymectomy on growth of human cell xenografts in newborn rats. C. M. SOUTHAM 533
Rapid collection of human leukocytes or lymphocytes from peripheral blood. C. D. SEVERSON, D. H. FRANK, G. STOKES, M. F. SEEPERSAD, AND J. S. THOMPSON 535
Thymus-bone marrow interaction in transplantation immunity. B. F. ARGYRIS ... 538
Immunoglobulin production and allograft rejection in the fetal lamb. R. A. PRENDERGAST, A. M. SILVERSTEIN, AND C. J. PARSHALL, JR. 540
OBITUARY 543

No. 5, November 1969

ARTICLES

Nephritis induced by antilymphocyte serum. An electron microscopic and immunohistochemical study. R. R. LINDQUIST, R. D. GUTTMANN, C. B. CARPENTER, AND J. P. MERRILL 545
Amino acid transport in stored renal medulla. L. M. LOWENSTEIN AND L. HAGOPIAN .. 558
The role of humoral antibodies in the rejection of renal homografts by rabbits. J. KLASSEN AND F. MILGROM 566
Colony-forming cells in the spleen. Determination of the fraction transplanted. A. L. KRETCHMAR AND W. R. CONOVER 576
The role of tissue cells in anti-A hemagglutinin formation in rabbit skin allografts. J. E. COLBERG, B. RIBAK, AND C. COHEN 582
Prolongation of allograft survival with antimacrophage serum. J. W. DYMINSKI AND B. F. ARGYRIS 595

Chronic kidney allograft reactions in rats. E. White, W. H. Hildemann, and Y. Mullen 602
Biological properties of antibody classes in transplantation immune sera. G. A. Voisin, R. Kinsky, F. Jansen, and C. Bernard 618
Hemopoietic chimerism in imported and laboratory-bred marmosets. N. Gengozian, J. S. Batson, C. T. Greene, and D. G. Gosslee 633
Immunological tolerance and rejection of skin allografts in the marmoset. R. P. Porter and N. Gengozian 653
The significance of the intercellular matrix in the survival of cartilage allografts. S. Heyner 666
Effects of immunosuppressive treatment on rejection of heart allografts in rats. D.W van Bekkum, G. A. Heystek, and R. L. Marquet 678
α_2-Globulins in renal graft rejection. Effects on in vitro lymphocyte function. R. R. Riggio, G. H. Schwartz, F. G. Bull, K. H. Stenzel, and A. L. Rubin 689
Heterologous antilymphocyte serum. Influence of immunogenicity on immunosuppressive properties. S. Raju and J. B. Grogan 695
Depression of lymphocyte transformation by drugs in vitro. Effects of a new immunosuppressant, Cinanserin. G. H. Schwartz, K. H. Stenzel, and A. L. Rubin 704
ABSTRACTS 712
FORTHCOMING MEETINGS 716
BOOK REVIEWS 717
KIDNEY TRANSPLANT REGISTRY
Seventh report of the human kidney transplant registry 721
Description of kidney transplant function during first year 728

LETTERS TO EDITOR

Relation of antigens Da6 and 6^b (Da9) with the antigens of the second sublocus of the HL-A system. J. Dausset, J. Colombani, L. Legrand, and N. Feingold 739
In reply to Sir Michael Woodruff. D. A. L. Davies, D. C. Viza, J. Colombani, and J. Dausset 740

BRIEF COMMUNICATIONS

Simultaneous decrease of tumor-specific antigenicity and "hybrid effect" in a murine methylcholanthrene-induced sarcoma. D. Oth, M. Donner, and C. Burg 742
Delayed hypersensitivity in vitro using human peripheral leucocytes. B. Mookerjee, C. F. D. Ackman, and J. B. Dossetor 745
Immunological tolerance induced in adult dogs by small amounts of horse IgG. W. Land, J. Seifert, A. Fateh-Moghadam, U. Hopf, and W. Brendel 748
Preservation of compensatory renal growth in thymectomized mice. S. Bump and R. A. Malt 750
Proliferation of spleen-derived cells in thymus of lethally irradiated mice. M. L. Tyan and L. J. Cole 751
Effect of normal serum on survival of rat ovary allografts. M. Glaser and D. Nelken 753
NOTE 755

No. 6, December 1969

ARTICLES

The mixed leucocyte reaction. II. A comparison of the MLR with skin graft survival and serological methods of detecting H-antigens using F_2 generation rats. M. W. Elves 757
Effects of amantadine on the reactivity of human lymphocytes stimulated by allogeneic lymphocytes and phytohemagglutinin. A. B. Bredt and M. R. Mardiney, Jr. 763

The effect of antilymphocyte serum on the induction and growth of tumor in the adult mouse. G. J. Cerilli and R. C. Treat 744
Cellular differentiation in the thymus. Changes in size, antigenic character, and stem cell function of thymocytes during thymus repopulation following irradiation. S. E. Order and B. H. Waksman 783
Serotyping for homotransplantation. XXXI. A 45-minute microcytotoxicity test. K. K. Mittal, M. R. Mickey, and P. I. Terasaki 801
The effect of antilymphocytic serum on homologous ^{51}Cr-labeled lymphocytes in rats. J. Seifert and W. Brendel 806
Cytolysis of human cells by antibodies in normal rabbit serum. R. B. Herberman .. 813
Kidney preservation for transportation. II. A simple technique for 12-hr storage and air transport. G. M. Collins, M. Bravo-Shugarman, and P. I. Terasaki 821
Serotyping for homotransplantation. XXXII. HL-A haplotypes in Japanese families. D. P. Singal, M. R. Mickey, and P. I. Terasaki 829
Renal transplantation in the inbred rat. XII. A mechanism of long-term survival of allografts after antithymocyte immunoglobulin treatment. R. D. Guttmann, R. R. Lindquist, and S. A. Ockner 837
Antigenicity of the blastocyst masked by the zona pellucida. D. A. James 846
Comparative typing of human kidney cells and lymphocytes by immune adherence. B. dePlanque, G. M. Williams, A. Siegel, and C. Alvarez 852
Histocompatibility genes of mice. IX. The distribution of the alleles of the non-*H-2* histocompatibility loci. R. J. Graff and G. D. Snell 861
A simple method for short-term preservation of a liver homograft. S. W. Schalm, J. L. Terpstra, B. Drayer, C. van den Berg, and J. J. Veltkamp 877
Antigenicity of skin and kidney in the rat, as studied in a transplantation model. A. Sakai 882
NOTE 889
BOOK REVIEWS 890
PAST MEETING 891
FORTHCOMING MEETINGS 893
ABSTRACTS 894

BRIEF COMMUNICATIONS

Varicella in renal transplantation: report of a fatality. C. F. Zukoski 899
Transfer of autoantibody formation by NZB bone marrow cells. V. Allman, A. Ghaffar, J. H. L. Playfair, and I. M. Roitt 899
Prolonged survival of human skin grafts in immunologically tolerant rats. H. J. Buchsbaum, K. V. Aliminosa, and C. M. Southam 901
INDEX 904